THE EARLY TRANSPORTATION AND BANKING ENTERPRISES OF THE STATES IN RELATION TO THE GROWTH OF CORPORATIONS.

It is a commonplace observation that the last century witnessed everywhere a great extension of the activities of the State into the field of industry. Americans are not accustomed to think of their own country as taking a very prominent part in this movement, much less as having ever occupied a leading position in it. To them, as to the rest of the world, America is the land of private enterprise *par excellence;* the place where "State interference" has played the smallest part, and individual enterprise has been given the largest scope, in industrial affairs; and it is commonly assumed that this was always so. It is true that even in colonial times the American people displayed an energy in their economic life which Burke declared was equalled by "neither the perseverance of Holland, nor the activity of France, nor the dexterous and firm sagacity of English enterprise." It is true, also, that for more than fifty years the federal government was in the hands of a party that professed to be afraid of strong government, that abolished the internal revenue system because it interfered too much with the private affairs of the citizens, and made the payment of the national debt a leading feature of its policy, lest its existence should breed extravagance and corruption in the government. Nevertheless, it is a fact that this country was one of the first to exhibit this modern tendency to extend the activity of the State into industry. And it advanced so rapidly and so far along this line that it became for a time almost as prominent an example of it as the Australian colonies are in our own time.

Not to mention the promptness with which our people turned from the free-trade ideas of the Revolution to the protective policy, when conditions seemed to require the develop-

ment of manufactures, consider the action of both the federal and State governments towards the early transportation and banking enterprise of the country. Before any European government had projected a comprehensive system of State canals and roads, President Jefferson had called the attention of Congress to such a policy, and Gallatin had submitted his famous report which outlined a complete system of roads and canals, and recommended that the federal government construct them directly or subsidize corporations for that purpose. Work was actually begun by the federal government on the Cumberland road in 1806; and it was ultimately prevented from carrying out Gallatin's plan, not so much by the opposition of the majority of the people as by the accident of hostile executive vetoes. As it was, the government for many years made liberal appropriations of money and public land to assist in the construction of the chief works recommended by Gallatin. To the adoption of a policy of internal improvement by the States there was no such obstacle, and here we find the movement working itself out without obstruction. Something was done by the States in the last decade of the eighteenth century to aid transportation enterprises. Virginia, Maryland, and New York voted money to assist in extending canal communication from the Potomac and Hudson into the interior. Pennsylvania voted a considerable revenue to improving the navigation of rivers and to subsidizing turnpike and bridge companies. But it was after the close of the second war with England that the States took up the work of internal improvement on a large scale. New York led the way with her Erie Canal in 1817, and soon after expanded this into an extensive system of canals, reaching all parts of the State. Pennsylvania followed in 1825 with an equally extensive system of canals; Maryland, Virginia, and the federal government began the Chesapeake and Ohio Canal in 1828; and Virginia as early as 1816 projected a canal to connect the James River with the Ohio, and after 1820 pushed its construction vigorously. A little later a number of railway projects were undertaken: the Baltimore & Ohio in 1828; the Erie in New York and the Western in Massachusetts in the early '30's; while Virginia, South Carolina,

and Georgia projected lines to connect their seaports with the Western waters. The movement was taken up in the West in the early '20's, when Ohio began a system of State canals almost as extensive as those of New York and Pennsylvania, followed about ten years later by Indiana, Illinois, and Michigan, with extensive systems of both canals and railroads. Kentucky and Tennessee devoted considerable attention to the building of turnpike roads, and Kentucky especially to the improvement of the navigation of her rivers.

Nor were the transportation enterprises the only ones to receive the assistance of the States at this time. Almost from the first introduction of banks into this country, it became a common practice for the State governments to invest revenue in bank stock. Many of the early bank charters reserved to the States the right to subscribe for a portion of the authorized capital, and this right was in most cases exercised. With the exception of New Jersey and two or three of the smaller New England States, all of the older States owned more or less bank stock by 1812. Massachusetts had $1,000,000; Pennsylvania, $2,108,000; Maryland, $540,000; and New York, Connecticut, and Delaware, a small amount each. The Northern States ceased to make further investments of this kind at that time, though some of them continued to own their stock until a much later date. Pennsylvania did not dispose of hers until 1843. The Southern States, however, continued to accumulate holdings in bank stock until the Civil War; Georgia had between three and four million dollars in 1839; South Carolina owned all the stock of the Bank of the State of South Carolina, which amounted to $1,156,318; and a large part of Virginia's internal improvement fund, which amounted to $1,185,000, was made up of bank stock. The same policy was taken up in the Western States about 1820. In these States, however, the funds invested in bank stock were not, as in the East, derived from revenue; but the States sold their bonds to secure the necessary funds. The first State to do this on a considerable scale was Louisiana in 1824; and between that date and 1840 the Western and South-western States, including the territory of Florida, issued over $65,000,000 of bonds to provide banking capital to corporations.

Thirteen of the States invested more or less of their shares of the surplus revenue of 1837 in banking. Ten of these were Southern States.*

Thus during the first thirty or forty years of the century the federal and State governments became actively interested in a great number of the most important enterprises in the country. At the very time when the federal government was paying off its funded debt, in order that it might not become a permanent feature of our policy and thus tempt the government to extravagant expenditure, the States were creating a funded debt of more than $200,000,000,—a larger debt than the federal government had ever owed, and the first large funded debt created by the government of any country for purely industrial purposes. It is the purpose of this paper to explain at length the conditions which gave rise to this remarkable movement towards State enterprise here in America, where of all places in the world we should least expect to find it.

I.

To form a correct judgment of the influences which produced this movement, it is necessary to understand the general character of our economic development during the period when it occurred. We will begin, therefore, with a brief sketch of that development during the first forty or fifty years of the nineteenth century. The most important event in our economic history during this period was the opening of the West. By the opening of the West I do not mean the early settlement of the region west of the mountains, which took place on a large scale during the thirty years after the Revolution. This in itself, as I shall attempt to show, had very little influence upon the economic life of the country. I

*The following table gives the amount of bonds issued by each State for banking purposes :—

Louisiana	$23,400,000	Indiana	$2,390,000
Alabama	10,400,000	Illinois	2,665,000
Mississippi	12,000,000	Kentucky	2,000,000
Florida	3,950,000	Tennessee	3,000,000
Arkansas	3,100,000	Missouri	2,500,000

Knox : *History of Banking in the United States;* Trotter: *Observations on the Financial Position and Credit of the North American Union;* House Report No. 296, 3d. session 27th Congress; Bourne: *History of the Surplus Revenue of 1837; American Almanac*, 1841, p. 130.

refer rather to that improvement in the economic condition of the West which set in about the time of the second war with England, and which in a decade or two entirely changed the relation of that region to the rest of the country, lifting it for the first time into that important place in our economic life which it has until recently occupied. This event marks the shifting of the centre of interest in our economic activity from the ocean and foreign commerce to the interior and internal commerce. It was the ending of the colonial period in our economic development, and the beginning of what has been the chief object of our economic activity ever since; namely, the application of capital to the settlement of the interior and the development of its natural resources. In order to appreciate the significance of this change to the movement we are studying, it will be necessary to trace its history in considerable detail.

The settlement of new territory and the pushing of the frontier back into the interior are features of American life which began in colonial times. At the end of the Revolution the back country of Pennsylvania, Virginia, and the Carolinas, was full of people, and had its special frontier characteristics in industry and social life. Following the Revolution, these backwoodsmen and many emigrants from the tide-water region, who had been ruined by the war and the exhaustion of the soil, moved into the region west of the mountains. The census of 1790 showed 109,000 people in Kentucky and the region south of it, not to mention those who had settled in western Pennsylvania and Virginia, which must have amounted to as many more.* According to the census the Western States and Territories contained 387,183 inhabitants in 1800; ten years later they contained 1,075,398; and in 1820 2,207,476. To get the total Western population, it is necessary to add the number of inhabitants of western Pennsylvania and Virginia, which in 1820 amounted to 248,476 and 147,531 respectively, making a total for the whole West of 2,603,483. During the same period there was a great emigration to the wild lands

*The population of the four counties of Pennsylvania west of the mountains was, in 1790, 63,518. See Census of 1790.

The old frontier county of Cumberland in Pennsylvania contained, in 1760, 1,501 inhabitants; in 1770, 3,521; in 1793, 24,785. Coxe, *A View of the United States*, p. 512.

of northern and western New York, as well as northern New England. In 1790 the census showed only 1,075 people in New York west of Seneca Lake; in 1800 there were still but 17,016; by 1810 this number had risen to 72,000; and in 1820 to 211,000. These figures show how large a movement of people from the older communities into the interior took place during the thirty years following the Revolution. There must have been between one and a half and two million people living west of the mountains at the outbreak of the War of 1812.

Great as was this movement of people into the West, its economic influence was very slight. The general character of the industry of the country remained what it had been since colonial times. The West at that time had few economic prizes to attract settlers. To the emigrant from the tide-water region it offered a refuge from the pressure of hard times, where he could easily gain a rich subsistence for a numerous family. To the backwoodsman it could add to this the wild, free life of adventure which was so attractive to men of this class. But to the investor or the man who wished to make a fortune it had as yet hardly anything at all to offer. Consequently, its settlement could have little economic influence upon the country as a whole. A little consideration of the conditions upon which the prosperity of a newly settled country depends, and a comparison of these conditions with those prevailing in the West at this time, will make this sufficiently clear.

Since Adam Smith's time, economists have generally accepted his explanation of the prosperity of newly settled countries. "The colonists carry out with them a knowledge of agriculture and of other useful arts, superior to what can grow up of its own accord in the course of centuries among savage and barbarous nations. . . . Every colonist gets more land than he can possibly cultivate. He has no rent, and scarcely any taxes to pay." . . . The application of this efficient labor to the abundant natural resources is supposed to result always in a large production of wealth. . . . "The colony of a civilized nation which takes possession, either of a waste country or one so thinly inhabited that the natives easily give place to the

new settlers, advances more rapidly to wealth and greatness than any other human society." * This explanation, though it appears to account for the prosperity of new countries, does not in reality do so; for it quite overlooks the fact that these conditions have not always resulted in rapid progress in wealth. The mere presence of a certain number of industrious people in a country abounding with fertile soil, forests, mines, and fisheries, by no means insures a rapid development of these resources and a consequent large production of wealth. The economic advantages possessed by a people so situated consist simply in the ability to produce food and raw materials with a small outlay of labor. Before they can utilize these advantages, certain favoring conditions must be present. They must be able to dispose of these commodities in exchange for the commodities which they cannot so easily produce,—in a word, they must have a market.

Theoretically, it is possible for the new country to secure this market by the development of manufactures at home, whereby a non-agricultural population is created; and it might conceivably be better for the community, both socially and economically, to secure its market in that way. But, practically, it is very difficult, if not impossible, for it to do this; and in any case the process of doing it would be so slow that the "advance to wealth and greatness" must be much less rapid than that of new countries is commonly supposed to be. Manufactures on a large scale cannot be carried on without a permanent wage-earning class; and in a community in contact with cheap, unoccupied land, where every one can easily become an independent proprietor, it is almost impossible to create such a class. The social attractions of land ownership outweigh those of high wages. Every one has heard of the difficulty which was encountered in this country during colonial times and the early part of the nineteenth century in securing laborers to work for hire. Franklin tells us that even the Scotch-Irish immigrants to Pennsylvania, who had been trained as artisans at home, would not continue more than a few years in that capacity; the early textile manufactures in New England had to depend chiefly upon female laborers, whose average period of service

* *Wealth of Nations*, Book IV., chap. vii., Part II.

was less than five years; while the greatest difficulty was experienced by all the States in securing common laborers to construct the early canals. The creation of a wage-earning class in the North was in fact very slow and very difficult before the flood of immigrants came in, and the chief economic advantage of immigration to this country consisted not so much in the fact that the immigrants represented an actual addition to our laboring population as that they supplied material out of which we could easily create a wage-earning class at the time when we needed to organize labor in order to construct our railroads and develop manufactures. In the South, where even agriculture required the organization of labor in order to be conducted most efficiently, the difficulty or impossibility of inducing the whites to become wage-earners while they were in contact with cheap land is undoubtedly the chief reason why the cotton industry in this country was developed by slave instead of by free labor.

This difficulty of inducing men in a new country to give up the position of an independent proprietor and become a dependent wage-earner does not prevent the development of small manufactures, which are necessary for the immediate and pressing wants of the community, and require no great organization of workmen for their production. If the community for any reason is unable to secure these by trade, the manufacture of them will usually arise, as it did to some extent in the northern colonies in the eighteenth century.* But the development of manufactures is not likely to go much beyond this, or, if it does, that development is sure to be very slow so long as the cheap land continues. Under such conditions there will be much rude comfort among the inhabitants and no lack of the necessities of life. But the community cannot advance rapidly in the production of wealth and the accumulation of capital; division of labor and development of skill do not take place; town life does not arise; and social and economic progress is slow. It may even happen that a community suffers a decline in both its economic efficiency and social life, if compelled to remain for several generations under such conditions. The Boers of South Africa and the Southern mountaineers are good exam-

* Beer, *Commercial Policy of England toward her Colonies*, pp. 73-75.

ples of what may happen to a new community which remains for a long period of time in contact with cheap land and dependent upon the development of manufactures within itself for its economic prosperity.*

It is evident from this that the condition necessary to enable the settlers of a new country to utilize their rich natural resources, and so to advance rapidly in wealth and social well-being, is a market for the commodities which its natural advantages enable it to produce cheaply. It must have commerce with the outside world. In the history of modern colonization it is impossible to find a new settlement which has made great progress in wealth where this condition of a market for its products has not been supplied. All the leading colonies have been concerned in the production of some two or three commodities for which there was already a demand in the markets of the world. It was so with the colonies of all the European countries in the sixteenth, seventeenth, and eighteenth centuries, which were concerned almost entirely with the production of precious metals, tropical and sub-tropical products, like sugar, tobacco, rice, cocoa, and dyestuffs, and a few products of the temperate zone, like furs, fish, and naval stores. These were the only commodities which Europe wished to buy of new countries at that time; and the colonies in many cases came into existence and in all cases grew in wealth because they could produce to supply this demand. The New England and Middle colonies are no exception to this rule; for, though they had few markets in Europe, the rise of the West India sugar industry, based on slave labor, supplied the market which created their prosperity. Of course, the founding of many of the colonies was due to other than economic motives; but the subsequent progress of these colo-

*Mill saw clearly the influence of foreign commerce upon the prosperity of a backward community. . . . "There is another consideration, principally applicable to an early stage of industrial advancement. A people may be in a quiescent, indolent, uncultivated state, with all their tastes fully satisfied or entirely undeveloped, and they may fail to put forth the whole of their productive energies for want of any sufficient object of desire. The opening of a foreign trade, by making them acquainted with new objects or tempting them by the easier acquisition of things which they had not previously thought attainable, sometimes works a sort of industrial revolution in a country whose resources were previously undeveloped for want of energy and ambition in the people." . . . *Principles of Political Economy*, Vol. ii. p. 135.

nies in wealth was due to the rise of markets for their products. The same thing is true also of the great colonies and new countries of the nineteenth century, like Australia, South Africa, the Canadian North-west, California, and Argentina, whose economic progress has been primarily due to the rise of a market in old countries for wheat, meats, cotton, wool, and such commodities. There has always been a demand for gold and silver, and that accounts for the great part which their production has played in the settlement of new countries.

Let us see now what were the conditions existing in the West before 1812, and how far they correspond to those we have found to be necessary to secure the prosperity of a new community. Separated from the Eastern seaboard by complete lack of water communication, the Western people were unable to send any of their produce to the Eastern cities, except a few cattle, hogs, and horses, which could be driven to market over long distances, and a few commodities like furs, which could stand the expense of land carriage.* They were compelled, therefore, to depend almost wholly upon such markets as could be found at the mouth of the Mississippi. With the exception of a small amount that went from northern Ohio and western New York, nearly all Western produce was sent down the rivers to New Orleans. Not only was this an expensive and dangerous voyage before the days of steamboats, but there was very little demand for the produce of the West when it arrived at New Orleans. The population on the lower Mississippi was very small, and required little, if any, Western produce for its own consumption. The rest of the produce had to be sent around by sea to the Atlantic cities or exported to the West Indies, Mexico, or Europe.† The total

* "I may add that there is not any species of territorial produce in Kentucky, with the exception of ginseng, the value of which will pay for its conveyance by land from this State to Philadelphia." Michaux, *Travels to the Westward of the Alleghany Mountains*, p. 158.

† The European wars sometimes afforded a market, especially for wheat, as it did to the agriculturists of the Eastern States. Sea-going ships were built on the Western rivers, loaded with flour, and sent abroad. "The culture of wheat is of the greatest importance to the country, much more so, however, as an article of export than consumption." Michaux, *Travels*, p. 222; Roosevelt, *Winning of the West*, vol. iii. p. 225.

value of the produce received at New Orleans in 1807 was only $5,370,000, and by 1816 it had increased to only $8,773,000. 39 per cent. of this in the latter year came, however, from Louisiana and the lower Mississippi.* The remainder represents the chief part of the exports of an agricultural community of nearly two million people, an average of only about $2.70 per head of population. The number and size of towns in the West at this time is another convincing proof of the slight development of trade which had taken place. The only town of any considerable size in the whole West was New Orleans, through which passed the bulk of the exports and a considerable part of the imports. This town had 24,562 inhabitants in 1810. Pittsburg, from which was distributed the larger part of the imports, and which contained the most important manufactories in the West, had only 4,768 inhabitants; Lexington, which Michaux tells us carried on nearly all the commerce of Kentucky and Tennessee, had only 4,326 inhabitants; and Cincinnati had only 2,540. The other commercial places like Louisville, Nashville, Natchez, and St. Louis, were little more than mere villages, with about one thousand inhabitants each. The significance of these figures will appear more striking if we compare them with similar ones for some new communities of later times. In 1891 the two colonies of Victoria and New South Wales, whose industry was almost entirely agricultural and pastoral, had an average export of $20 per inhabitant. Washington and Oregon, with a population of 663,198 in 1890, had commerce enough to build up four cities with an aggregate population of 145,150, besides several smaller towns of from 1,000 to 4,000 inhabitants. Kentucky and Tennessee had in 1810 almost exactly the same population,—namely, 668,238; and the town which is said to have carried on the larger part of their commerce had but 4,326 inhabitants.

With regard to manufactories there were, as we should expect, a great number of small, local ones, producing articles of prime necessity. Almost every community had one or more grist and saw mills; and very many had forges, tanneries, and

* See *Report on the Internal Commerce of the United States for* 1887, pp. 185, 191-192. This volume contains an excellent history of the commerce on the Western rivers, pp. 178–234.

salt works, fulling and carding mills, and paper-mills.* In Pittsburg, Lexington, and Cincinnati there were a number of industries that were not purely local in character.† But the size of these towns, which were more largely commercial than manufacturing centres, shows how small were these industries; and travellers did not fail to note the obstacles which retarded their further growth. Michaux comments on the high price of labor, and says it "is occasioned by the inhabitants giving the preference to agriculture, there being but few who put their children to trade, because they require their assistance in their own employment." ‡

A contemporaneous description of the West by one whose commercial connection gave him a thorough knowledge of it will suffice to confirm the views here presented. Congress-

*The following is a description of a typical Western community in 1810. The town is Lebanon, Ohio, the county seat of Warren County, and contained about 300 inhabitants. "There is a printing office established in this place, the papers of which have an extensive circulation; the mail passes through once each week. The following are the principal mechanics, to wit, 20 house carpenters, 3 cabinet makers, 1 wheelwright, 3 tan yards, 4 shoemaker shops, 1 stocking weaver and reed maker, 2 blacksmith shops, 1 silver smith, 2 saddle shops, 1 nail maker, 1 hatter shop, and 3 tailor shops. There are at present established here 7 stores and 5 taverns." . . . There were also 7 grist-mills within six miles of the town, and 8 saw-mills. Cuming, *Sketches of a Tour in the Western Country* (1816).

An example of a town in the older part of the West where manufacturing was most extensively carried on is Brownville and Bridgeport in Fayette County, western Pennsylvania. They had about 1,000 inhabitants in 1809. "They contained . . . . 6 hat manufactories, 4 nail manufactories, 2 potteries, 1 brewery, 1 rope walk, and 6 boat yards. . . . In a distance of 15 miles are 9 forges, 12 furnaces, 3 rolling and slitting mills, 25 merchant mills, 30 saw-mills, 4 oil-mills, 3 fulling mills, 3 wool carding machines, 1 paper mill, and 2 sickle mills." . . . Cuming, p. 480.

† For the manufactures of the West consult Winterbotham, *View of the American United States*, iii.; Michaux, *Travels to the Westward of the Alleghany Mountains*, pp. 151-154; Flint, *Letters from America;* Cuming, *Sketches of a Tour to the Western Country.*

Pittsburg had industries that employed a total of 1,280 hands in 1817. There were 4 founderies with 87 hands, 5 glass factories with 174, 11 copper and tinsmiths with 100, 2 cotton factories with 26, 7 cabinet-makers with 43, a linen-mill with 20, a nail-mill with 47, and a paper-mill with 40.

Lexington had 5 coarse linen-mills with upwards of 500 employees, 3 cotton-mills, a large steam flour-mill, 3 or 4 paper-mills, and some tan-yards.

‡ Michaux, *Travels* p. 155. "The following comparison will render this defect of assistance in the western country more perceptible. At Charleston, in South Carolina, and at Savannah in Georgia, a white smith, tailor, shoemaker, etc., earns 2 piasters [dollars] a day, and cannot live a week for less than 6. At New York and Philadelphia he receives only one piaster, and it costs him 4 per week. At Marietta, Lexington, and Nashville, Tenn., this workman receives a piaster, or a piaster and a half a day, and can live a week upon one day's wages."

man Porter, of western New York, made the following statement in a speech in Congress in 1810: —

The great evil, and it is a serious one indeed, under which the inhabitants of the western country labor, arises from the want of a market. There is no place where the great staple articles for the use of civilized life can be produced in greater abundance or with greater ease, and yet as respects most of the luxuries and many of the conveniences of life the people are poor. They have no vent for their produce at home, and, being all agriculturists, they produce alike the same article with the same facility; and such is the present difficulty and expense of transporting their produce to an Atlantic port that little benefit is realized from that quarter. The single circumstance of want of a market is already beginning to produce the most disastrous effect, not only on the industry, but on the morals of the inhabitants. Such is the fertility of their land that one-half their time spent in labor is sufficient to produce every article which their farms are capable of yielding, in sufficient quantities for their own consumption, and there is nothing to incite them to produce more. They are, therefore, naturally led to spend the other part of their time in idleness and dissipation. Their increase in numbers far from encourage them to become manufacturers for themselves, but put to a greater distance the time when, quitting the freedom and independence of masters of the soil, they submit to the labor and confinement of manufacturers.*

* *Annals of Congress*, 1810, p. 1388. Compare Wakefield, *England and America*, ix., for the effect of dispersion of population on new communities.

The following extracts from reliable sources will further illustrate the condition of the West: "At that time [1823] a small portion of our citizens residing near the lakes were about to enjoy the benefits of commercial intercourse with New York by means of the Erie Canal, then approaching its completion; and those residing near the Ohio had access to New Orleans, a fluctuating market frequently glutted and depressed, in a warm and unhealthy climate, by means of that river and the Mississippi. But the inhabitants of the interior had no means of transporting to market any of the surplus productions of a luxuriant soil, except such domestic animals as were capable of being driven to the eastern marts or to the lakes or the Ohio River."

"It should not be forgotten that at this time wheat was selling at from 20 to 30 cents per bushel, and corn at from 10 to 12½, and in many instances, at prices even lower than these; and while the farmer could, with difficulty, raise money to pay his taxes, produce of his farm was literally rotting in his yard from want of a market."

"Under these circumstances, the greater portion of our population had little stimulus to industry, and limited means of improving their pecuniary or moral condition; and, owing to the little intercourse then existing between them and the inhabitants of other states and countries, still less ambition to make those improvements." *Report of the Ohio Canal Commissioners*, 1833.

"Manufacturers in the western states are, still, too limited in number and extent to promise us a speedy relief and protection from foreign debt. It, therefore, remains for us to avail ourselves of the more common production of the country. . . . Your observation must have perceived that one principal obstacle to the removal of the commercial distress consists in the cost and difficulty of

Such was the condition of the West before the War of 1812, and its economic relation to the rest of the country. Turn now to the changes which followed the war and their effect upon the West, and through it upon the country at large. As we have seen, the chief obstacle to the prosperity of this section was the lack of a market. Two events soon removed this obstacle, and started the whole country forward on its remarkable career of developmont. The first was the introduction of the steamboat; the second was the extension of cotton culture into the South-west. The steamboat was introduced on the Ohio at Pittsburg as early as 1811; but it was six years later before it had demonstrated its ability to stem the rapid current of Western rivers. With that event the Western country was suddenly supplied with a system of transportation which reached wide stretches of country, and brought them into easy communication with the seaboard. With the rise of the cotton industry in England and Whitney's famous invention in this country, cotton culture began its amazing growth. For more than twenty years it was confined almost entirely to the Eastern seaboard. A small amount was raised about New Orleans in Louisiana, near Natchez in Mississippi, and near Nashville in Tennessee; but in 1802 only 29,000 bales were exported from New Orleans, and this had increased to only 37,000 in 1816. About the latter date cotton planters began to turn their attention for the first time in considerable numbers to the South-west. The great body of fertile soil in this region suited to the cultivation of this staple, the numerous navigable rivers, coupled with the fact that cotton, having large value in small weight, could bear the expense of land transportation to the rivers from a long distance over poor roads, combined to make this extension of cotton culture into

transporting to market those productions which constitute, or, rather, make an almost only resource for regaining and preserving the value of our trade." *Message of the Governor of Ohio*, 1819.

"A great portion of the population which has poured into the western country for the last ten years has been honest and enterprising, but needy, and forced upon adventure by necessity. Their object has been existence and comfort for their numerous families. But when ready markets with easy and regular transportation are open to those countries, men of capital and men, too, of high standing as agriculturists, will be induced to leave an old for a new and more genial soil." *Considerations on the Great Western Canal; New York Corresponding Association for Promoting Internal Improvements.*

the South-west the source of the greatest profits in agriculture which the American people had ever enjoyed.* A flood of emigrants from the older slave States now poured into this region. Alabama and Mississippi did not contain more than 75,000 people in 1816. Only four years later their population was 200,000, and it more than doubled during the next ten years. Louisiana, which contained about 76,000 people in 1810, had 143,000 in 1820, and 215,000 in 1830. Certain parts of Tennessee, Arkansas, and Florida, where cotton could be raised, were settled with equal rapidity. New Orleans was the great central market to which the cotton product of this region was sent; and it received, as we have seen, only 37,000 bales in 1816. That amount rose to 161,000 bales in 1822, 428,000 bales in 1830, and reached 923,000 in 1840.† The cultivation of sugar in Louisiana was also increasing at this time, and was equally profitable.‡

The effect of this extension of cotton and sugar cultivation into the South-west upon the Southern States is well known. It opened up a very profitable field for the employment of the labor and capital of this section, and this economic advantage went chiefly to the revival and extension of the slave system. But its effect upon the Northern States, especially the newer States of the North-west, has hardly received the attention its importance deserves. In reality, it was that movement which gave to them their first important market, and thus supplied the one remaining requisite to their economic development. The use of slave labor on a large scale not only prevents the

* "The soil that is cultivated in these regions is exuberantly rich. In no other place does the planter accumulate so fast from mere agriculture. Louisiana undoubtedly exports more value, according to the extent of land cultivated, than any other country. Thé cotton plantations yield from $10,000 to $50,000 a year, and many of the sugar planters probably derive twice that sum from their annual crop." Flint, *Recollections of the Last Ten Years* (1855), p. 326.

"The profits of cotton growing when I was in Alabama (1852) were 35 per cent. One planter whom I knew had bought $15,000 worth of land within two years, which he could then have sold for $65,000. He expected to make that season $50,000 or $60,000 from his growing crop. It is certainly the place to become rich in." . . . Martineau, *Society in America*, vol. i. p. 228. See also Clay, *Works*, vol. i. p. 16.

† *Report on Internal Commerce of the United States*, 1887.

‡ The sugar product of Louisiana was in 1823 30,000 hogsheads, in 1828 88,000 hogsheads, and in 1845 186,000 hogsheads. *The Report of the United States Commissioner of Agriculture*, 1877, p. 29.

rise of manufactures, but it always causes a curious territorial division of labor in agriculture as well. Slave labor to be efficient, must be carefully supervised; and its maximum efficiency is therefore obtained only in those branches of agriculture which permit the close organization of labor. For this reason every slave community devotes itself for the most part to the production of a few staples, like cotton, sugar, tobacco, or rice, and finds it cheaper to purchase its food and other agricultural supplies, as well as its manufactured articles, from free labor communities. This gives rise to a trade in agricultural commodities between the slave communities and other agricultural communities. The important trade between the northern Continental colonies in the eighteenth century and the West Indies was a trade of this kind; and it was principally the development of the sugar colonies of the West Indies by slave labor, and the consequent dependence of these colonies on other communities for food and raw material, which provided New England and the Middle colonies with their most important market.* In exactly the same way the introduction and spread of cotton and sugar culture into the southern part of the Mississippi Valley led to a division of labor between the planters of the South and the farmers of the North, and gave rise to an important trade in agricultural produce upon the Western rivers of the same character as that which went up and down the Atlantic coast during colonial times between the Northern colonies and the West Indies.

The development of this trade between the cotton planters and the farmers began with the first introduction of cotton culture into South Carolina and Georgia. Ramsey tells us that down to about 1793, when cotton began to be raised in South Carolina, that State produced both wheat and corn for export. By 1807, however, the greater profit to be earned in the production of cotton had attracted labor and capital to that industry, and the State was importing both wheat and corn.† Olmsted said in 1856: "The slave labor of the State [South Carolina] is almost exclusively devoted to the culture

*For the character and importance of this trade consult Beer, *Commercial Policy of England toward the American Colonies*, chap. vi.

† Ramsey, *History of North Carolina*, vol. ii. p. 217.

of cotton and rice. Live stock, meat, corn, bread-stuffs, and forage, though the soil and climate of a large part are entirely favorable to that production, are very largely imported; and for nearly all sorts of skilfully manufactured goods the people are quite dependent on the Free States. Trade and skilled labor of all sorts is mainly in the hands of persons from the Free States or foreign countries." * . . . Live stock was raised in great numbers in the back country of the Southern colonies in the eighteenth century, and was a considerable item of export; but, after the introduction of cotton culture, horses, mules, and swine were imported into these States from Kentucky and Tennessee. This trade had become very large by 1825, and played a considerable part in the discussions over the tariff and nullification in the years following.† In the South-west the same tendency to concentrate attention upon the two great staple products, sugar and cotton, and to procure food and other supplies from the North, showed itself even more strongly than in the East. Flint says of Louisiana in 1825 that "corn, sweet potatoes, melons, and all northern fruit, with the exception of apples, flourish here; though the planters find the great staples, cotton and sugar, so much more profitable than other kinds of cultivation that many of them calculate to supply themselves with provisions almost entirely from the upper country." ‡ An English traveller in

* *Seaboard Slave States*, p. 540.

† "When the policy of 1824 went into operation, the South was supplied from the West through a single avenue [the Saluda Mountain Gap] with live stock, horses, cattle, and hogs to the amount of considerably upwards of a million dollars a year." Haynes's Speech on the Tariff, *Congressional Debates*, vol. viii. p. 80. Compare Clay's remark on the same subject, *Works*, vol. vi. p. 16.

During nullification troubles it was proposed to influence the North-western States to repeal the tariff act by prohibiting the introduction of cattle, horses, mules, hogs, beef cattle, bacon, and bagging into the slave States from this section. See Niles's *Register*, vol. xxxiv. pp. 301–304. Houston, *A Study of Nullification in South Carolina*, p. 70. "There is not a finer grazing country in the world than South Carolina; and, were attention paid to the raising of cattle, sheep, goats, hogs, horses, mules, etc., this state might supply itself as well as all the West India Islands with these useful animals; but every other object gives place to cotton. Immense numbers of cattle, hogs, horses, and mules, are driven annually from the western country into this state, and sold to advantage." Mills, *Statistics of South Carolina*, p. 155, 1826.

For a description of this trade in the '50's see Olmsted, *A Journey in the Back Country*, pp. 223, 224.

‡ Flint, *Recollections of the Last Ten Years*, p. 34.

the South-west in the '50's had a similar comment to make: "Strange to say, it is more difficult to raise the requisite quantity of provisions for a southern plantation than to manufacture wagons, plows, houses, and articles of clothing. The bacon is almost entirely imported from the northern states, as well as a considerable quantity of Indian corn." *

The extent of this commerce between the North-west and the South it is impossible to ascertain with accuracy, for there are no reliable statistics of it as a whole. The rapid growth in the number of steamboats on Western rivers, especially the number running between the Ohio and upper Mississippi and New Orleans, indicates a corresponding increase in the trade between these sections. Steamboats on the Western rivers increased from 20 in 1818 to 200 in 1829, 450 in 1842, and 1,200 in 1848, while their size and carrying capacity was also increasing.† Besides this a large amount of flatboat tonnage existed, and a considerable part of the produce of the Ohio Valley was sent to market by this means. In 1845 the flatboat tonnage amounted to 620,000 tons, and the steamboat tonnage to 1,262,000 tons. The number of steamboat arrivals at New Orleans from the Ohio and upper Mississippi are not separated from the total arrivals before 1859, but in that year they were about 1,500 out of a total of 4,000. The value of the produce received at New Orleans increased from $8,700,000 in 1816 to $26,000,000 in 1830, $50,000,000 in 1841, and $185,000,000 in 1860. Between 1816 and 1820 about 61 per cent. of this tonnage was farm produce from the North-west. The proportion, though not the total amount, of farm produce declined until it reached 28 per cent. in 1860.‡ The steady growth of the river towns which handled this trade also indicates its growth. Thus Cincinnati increased from 9,600 in 1820 to 115,-

*Russell, *North America: Its Agriculture and Climate*, p. 265. "The business of the merchants here [southern Illinois] is very extensive. They buy up the produce of the land, consisting of wheat, maize, and other grain, of cattle, salted pork, butter, cheese, and other articles, which they carry to New Orleans, and there they purchase sugar, coffee, tea, foreign wines, woollen cloth, and all other articles which the Illinois planters require for their own use." Stuart, *Three Years in North America* (1830), vol. ii. p. 239. Consult De Bow's *Review*, vol. xvi. p. 540, for the trade of Cincinnati with the South.

† Chevalier, *Society, Manners, and Politics in United States*, p. 216; De Bow, *Resources of the South and West*, vol. ii. p. 460.

‡ *Report on Internal Commerce of the United States*, 1887.

000 in 1850, Louisville from 4,000 to 43,000, and St. Louis from 4,900 to 77,000. It was estimated in 1845 that during the twenty years previous planters had spent $900,000,000 in neighboring States for mules, horses, implements, and clothing.* These are but rough indications of the extent of this trade; but they are sufficient to establish the fact that it was very large, and that it grew up almost entirely after 1815.

The influence of this extension of cotton culture upon the North was not confined to the agriculture of the North-west. It affected every other Northern interest as well. The prosperity which it brought to the whole Southern and Western population increased their ability to purchase such manufactures as they required, and thus provided Eastern manufacturers with a rapidly expanding market. This was the great influence which caused the steady growth of manufactures from 1816 to the Civil War, both under the protective policy of the earlier and the low tariff policy of the later years. Commercial interests also received great stimulus. The internal trade of the country sprang at once into commanding importance. A large and prosperous agricultural population in the South and West was devoting itself to the production of valuable crops of food and raw material, and exchanging them with the North-eastern States and Europe for manufactures. This trade opened new opportunities for the merchant, the banker, the ship-owner, the insurance company,—to the whole commercial class, in fact. The fact that all the capital which the South accumulated was put into cotton culture left this whole field open to the commercial capital of the North-east.† An eager rivalry arose among the commercial cities of the seaboard to secure a share of this internal trade, and each appreciated that its future position would be determined chiefly by the success of its efforts in this direction.

The effect of all these changes upon the economic condition of the country at large was almost revolutionary. It opened the eyes of the people to the economic possibilities of their situation, and turned their attention for the first time to the

* Ingle, *Southern Sidelights*, p. 55.

† For an account of the way Northern capital absorbed Southern trade consult the records of Southern Commercial Conventions in De Bow's *Review*.

exploitation of their natural resources. The West ceased to be a mere refuge of poverty and field for the adventure of pioneers. The enterprise and capital of the country turned away from the ocean and foreign commerce, and found here a new field for its operation. One of the most striking features of the new period was the increase of speculative activity everywhere in American industry. This was largely the result of the enormous increase in land values, to which the changes we have described gave rise. The choice cotton lands of the South-west and the coal lands of eastern Pennsylvania suddenly became worth fabulous sums.* Along the canals and rivers, especially in western New York and central Ohio, farm produce more than doubled in value; and the value of the land rose correspondingly.† From New York on the east to New Orleans on the west, new towns were springing up along the lines of trade, and old ones growing with a rapidity that was new in American experience. The population of New York increased from 123,000 to 203,000 in the ten years from 1820 to 1830; New Orleans, from 27,000 to 46,000; Cincinnati, from 9,000 to 24,000; and Louisville, from 4,000 to 12,000. Buffalo and Rochester were hardly in existence in 1816; in 1830 they had 18,000 inhabitants. The number of villages along the New York canals increased from 55 to 105 between 1817 and 1833. Of course, the growth of all these cities and towns caused a corresponding increase in the value of real estate. That of New York went up from $69,000,000 to $165,000,000 in ten years, and the increase in many others was still greater. It is easy to see how all these things would foster speculation. Josiah Quincy declared in 1826 "that the enormous increase in wealth without labor which has come to fortunate speculators since 1815 seems to make the invoca-

*One tract of coal land rose in value from $9,000 to $42,000 between 1824 and 1829, another from $190 to $36,000, and a third from $1,400 to $12,000. *American Annual Register*, 1829–30, p. 88. Martineau, *Society in America*, vol. i. pp. 228 259; ii. 65.

† The land of the Holland Land Company in western New York was selling at $25 per acre in 1825. Two years before it was hardly salable at all. Niles's *Register*, July 2, 1825.

Wheat was worth from 25 to 37 cents a bushel in central Ohio in 1825, and from 50 to 75 in 1832. Corn was worth 12 cents a bushel at Dayton in 1822, and 37 cents at Cincinnati in 1832. Niles's *Register; Report of Ohio Canal Commissioners*, 1832.

tion of chance legitimate business."* This speculative tendency went on increasing until it culminated in the crisis of 1837–39,—the first of a series of such crises which have accompanied the development of the West.†

II.

We are now in a position to understand the economic forces which were acting in this country during the early part of the nineteenth century, and to judge correctly of the causes which led the American people at that time to make so large a use of the powers of the State to assist industries. There are three matters which need to be considered in this connection, in order to bring out the situation which produced the movement. The first is the great increase in the demand for capital which accompanied the opening of the West; the second is the supplies of capital which were available at that time to satisfy this demand; and the third is the obstacles which prevented this capital from being secured and applied to the various projects of the time by the ordinary agency of private enterprise, the corporation. We will take up each of these matters in turn.

The effect which the economic changes described above had upon the demand for capital may best be shown by comparing the chief enterprises in which capital was invested before 1815 with those that arose after that date. Demand for capital in any community means the existence of numerous opportunities for its profitable investment. Such opportunities had always

* *Figures of the Past*, p. 275.

Chevalier wrote in 1835: "Everybody is speculating, and everything has become an object of speculation. The most daring enterprises find encouragement. All projects find subscribers.... The principal objects of speculation are those subjects which chiefly occupy the calculating minds of the Americans; that is to say, cotton, land, city and town lots, banks, railroads." *Society, Manners, and Politics in the United States*, p. 305.

See also Martineau, *Society in America*.

† I do not overlook the fact that speculation in wild lands was common from the first settlement of the West after the Revolution, but this early speculation was of a somewhat different character from that of later years. No such great appreciation in the value of land took place in the West as was the case later. The rush of settlers created a demand for the land. The speculators sought to get a title to large tracts of it at low prices, in order to sell it out in small lots to the settlers at a slight advance. See Michaux, *Travels to the Westward of the Alleghany Mountains*, pp. 134, 197, 297; Roosevelt, *Winning of the West*, vol. iii. pp. 5–10; *Observations on the North American Land Company lately instituted in Philadelphia*, London, 1794.

existed in America in sufficient numbers to absorb all the capital that could be obtained, and interest had been high; but these opportunities had been confined for the most part to enterprises connected with commerce, to mercantile transactions, banking, insurance, shipping, and, to a small extent, manufactures. The people had not found it profitable to risk much capital in enterprises designed to promote the settlement of the country and the exploitation of its resources. The principal ways in which capital is applied to a new country for this purpose is in constructing works of transportation, canals or railroads, and in supplying advances of goods through commercial credit or making loans of cash to settlers to enable them to clear and cultivate the land. In Pennsylvania and the States north of it considerable progress had been made in building turnpike roads during the ten or fifteen years prior to the war. But the improvement of rivers and building of canals, which alone could enable remote regions to send their produce to market, had been almost entirely neglected. Numerous efforts had been made to induce capital to take up this work, but with very little success. Two small canals, one in Massachusetts to connect Boston with the Merrimack River, the other in South Carolina to connect Charleston Harbor with the Santee River, were all that had been completed. An imperfect canal navigation had been opened from the Hudson to Lake Ontario, and the navigation of the Susquehanna, Potomac, and James Rivers slightly improved. The capital for these works had been secured with great difficulty; and many similar projects, like the Delaware & Chesapeake, the Delaware & Schuylkill, and the Schuylkill & Susquehanna Canals, had secured no capital at all.* In the settlement of the West and the development of its resources, men were even less inclined to risk their

* For the progress of turnpike building consult the statutes of the different States. The number of turnpike companies chartered can here be found. 55 turnpike companies were chartered by Pennsylvania between 1793 and 1812, 57 by New York between 1796 and 1805, and 105 by Massachusetts between 1797 and 1812. Gallatin's *Report on Roads and Canals* gives an account of the canals up to 1807. They were as follows : —

Middlesex Canal	cost	$550,000
Santee & Cooper	"	650,000
Western Island Lock Navigation	"	232,000
Susquehanna Improvement	"	250,000
Potomac "	"	444,000
James River "	"	244,000

capital. I have found no evidence that any Eastern capital was invested in this way before 1815. The settler moved out into the wilderness with his own little stock of household goods, farm implements, and cattle. No merchant with large credit in the East stood ready to advance supplies of food and other necessaries to him, while he devoted his labor to the production of a crop to be sent to market, nor was he assisted to clear his land and prepare it for cultivation by loans of cash from individuals or mortgage companies. Of course there were banks in the new States; but most of them were mere paper money machines, with no real capital at all, and those that had a real instead of a nominal capital had to depend more upon local than upon Eastern supplies.

After 1815 the situation began to change. As the settlement of the West took on a different character with the improvement of its economic condition, enterprises designed to promote its development received much more attention from the business men of the country. Not only was the utility of such works to the public more clearly perceived, but the possibility of their yielding a profit to the investor appeared less remote; and, as a result, many more such projects came into existence. The commercial cities of the seaboard were the first to be affected. They had long been interested in Western trade, and some of them had made efforts to improve their communications with the West; but the trade before 1815 was comparatively small, as we have seen, and, with the exception of a canal of little value from the Hudson to Lake Ontario and some little improvement in the roads from Philadelphia and Baltimore to the Ohio River, nothing had been accomplished. They now took up the matter in earnest. New York was the first to act, and in two years after the close of the war was ready to break ground on a canal to connect the Hudson with Lake Erie, and another to connect it with Lake Champlain. Virginia established a Board of Internal Improvements in 1816, and began the James River and Kanawha Canal in 1820; Pennsylvania commenced the construction of a canal to connect the Susquehanna River with Pittsburg with a portage railroad over the mountains in 1825; Maryland, Virginia, and the federal government under-

took to build the Chesapeake & Ohio Canal to connect the Potomac and Ohio Rivers in 1828; and a legislative committee recommended a canal to connect Boston with the Hudson as early as 1826. With the advent of the railroad a new crop of projects to reach the West arose. The Baltimore & Ohio was the first, begun in 1828; a few years later the Massachusetts project of a canal to the Hudson was changed into the Western Railroad from Worcester to Albany; New York planned the Erie Railroad to connect New York Harbor with Lake Erie; Virginia proposed to reach the West by a railroad from Lynchburg on the James River Canal south-west to the Tennessse River; Georgia was to reach the West by extending her local railroads from Atlanta to Chattanooga; while South Carolina, Kentucky, and Tennessee united to further the construction of the Louisville, Cincinnati & Charleston Railway to connect the Ohio River with the south Atlantic seaboard. Besides these larger works there was a multitude of smaller ones in nearly all the Eastern States. Not to mention turnpike roads, there were the Blackstone and Farmington Canals in New England, the former to connect Providence with Worcester, and the latter New Haven with the Connecticut Valley. New York and Pennsylvania planned a network of lateral canals connecting their main works with all parts of these States. The development of the anthracite coal industry began immediately after 1815, and led to a series of canal projects in New York, New Jersey, and Pennsylvania. The Schuykill Navigation was the first, beginning in 1815, and followed about 1825 by the Lehigh Navigation and the Delaware & Hudson, and Morris Canals. The Raritan Canal was also projected a little later, to connect New York and Philadelphia. A great number of small canals and river improvements were undertaken in Maryland, Virginia, and the States south of them. The Delaware & Chesapeake and Dismal Swamp Canals were the largest of these. The local railway projects were numerous in all the States after 1830, particularly in Massachusetts, New York, and Virginia.

In the West the transportation enterprises were scarcely less numerous or magnificent. The most important works were to

connect the lakes with the Ohio and Mississippi Rivers, while the rest were either branches of the main lines or shorter lines designed to connect the interior of the States with the lakes or the rivers. The first to be undertaken was the Ohio Canal from Cleveland to Portsmouth, which was begun in 1825; the Miami Canal from Cincinnati to Dayton was begun at the same time, but was soon after extended to Toledo, making a second line from the lake to the Ohio River; the Muskingum River was made navigable from its mouth to its junction with the Ohio Canal at Dresden; and two canals were built from the Ohio Canal eastward to connect with the canal system of Pennsylvania. In western Pennsylvania a line was built from Beaver on the Ohio River to Erie on the lake. West of Ohio the Wabash Canal was projected from the Miami to the navigable waters of the Wabash, thus connecting Lake Erie with the Ohio by a fourth route. The Illinois & Michigan Canal from Chicago to the Illinois River made still another connection between the lakes and the river system of the West. Besides these, many smaller canals were projected and partially constructed: the Whitewater Canal northward from the Ohio River to the National Road in eastern Indiana; the Central Canal of Indiana through the State from the Wabash Canal to Evansville on the Ohio River; several branches to the Ohio Canal; the Sault Canal and one across the lower peninsula in Michigan; the Louisville & Portland Canal around the falls of the Ohio; a canal around the Muscle Shoals of the Tennessee in northern Alabama; the improvement by slack-water navigation of the Kentucky, Licking, Green, and Barren Rivers in Kentucky. These improvements, together with the rivers and lakes, made up a network of navigable waterways for the West quite equal to anything then to be found in the world. About the middle of the '30's several of the Western States also projected important railway lines. Michigan undertook to build two lines across the State to connect Lake Erie with Lake Michigan. Illinois planned and began the construction of the Illinois Central to connect the Illinois and Michigan Canal at La Salle with Cairo on the Ohio River, with numerous branch lines to the east and west, reaching all parts of the State. There was one line each in Indiana and Kentucky,

from Madison on the Ohio to La Fayette on the Wabash Canal in the one case, and from Louisville to Frankfort in the other. In Ohio, Kentucky, and Tennessee great numbers of turnpike roads were projected. Capital was required also for the expanding internal trade of the country and to assist in a more rapid development of Western agriculture. This showed itself in the establishment of numerous large banks in all the new States, to which reference was made at the beginning.

It is clear from this review that the twenty years following 1815 was marked by an enormous increase in the demand for capital. All these enterprises which have been enumerated were not mere visionary projects, to be talked about and then abandoned; but capital was invested in every one of them, and the larger part of them were actually carried through. If we compare them with the small number and size of the enterprises carried on during the twenty years before 1815, we are struck at once by the contrast. They evidently mark the beginning of what we may call the capitalist era in American industry. With the exception of banks, whose capital is in fact not invested in a single industry, but divided up in loans among a great number of different industries, there had never been an industrial undertaking in the country that called for as much as a million dollars capital. Moreover, the fixed capital accumulated in this country was up to that time insignificant. The people knew nothing of large enterprises in which great amounts of capital had to be sunk, and profits awaited for a long period of years.* The canal and railway projects to connect the Eastern cities with the West, and the lakes with the Ohio and Mississippi, required from two or three to ten millions dollars; and years must elapse for the country to settle and trade to develop before they would yield their maximum return. The new demand for capital was not only vastly greater

* Gallatin said in 1807: "Notwithstanding the great increase of capital during the last fifteen years, the objects for which it is required continue to be more numerous and its application is more profitable than in Europe. A small portion therefore is applied to objects which offer only the prospect of remote and moderate profit. And it also happens that a less sum being subscribed at first than is actually required for completing the work, this proceeds slowly, the capital applied remains unproductive for a much longer time than was necessary, and the interest accruing during that period becomes, in fact, an injurious addition to the real expense of the undertaking." *Report on Roads and Canals.*

than anything hitherto known, but it was for large masses of capital to be sunk, and therefore all risked in a single enterprise.

So much for the extent and character of the demand for capital which arose at this time. Let us see now what supplies of capital were available for investment in these enterprises. There were of course but two sources of supply,—the savings of our own people and such surplus capital as foreigners could be induced to lend us. Regarding domestic capital the situation had greatly improved during the generation prior to 1815. In the colonies, as in all new countries, there was no considerable fund of loanable capital. Such capital as existed was chiefly in the form of trading capital or shipping, and was used by its owners themselves rather than lent out by them to other persons. But even the trading capital of the colonies was by no means all owned by Americans. Adam Smith says that the greater part of the exports and coasting trade of the colonies was carried on by capital of merchants residing in the mother country; and even the warehouses and stores from which goods were retailed in some colonies, particularly in Virginia and Maryland, were owned by the same parties.* The complete lack of commercial banks in the colonies goes far to confirm the truth of this statement. Goods were sold on long credits of a year or more by English merchants, and the bills either carried by them until collected or else discounted by bankers in England. There was thus no basis for commercial banking in the colonies. It was estimated that Americans owed English merchants $28,000,000 for goods at the outbreak of the Revolution.† After the Revolution English merchants relied upon their ability to grant us longer credits than the merchants of other countries could give, to secure control of our trade; and the conditions which had preceded the war were promptly re-established.‡ Madison declared in 1785 that England had never monopolized the trade of Virginia more completely than she did at that time. The events which changed this situation were the outbreak of the wars in Europe

* *Wealth of Nations*, Bohn edition, vol. i. p. 272; Macpherson, *Annals of Commerce*, vol. iv. p. 581.

† Lecky, *History of England*, vol. iii. p. 333; Winsor, *Westward Movement*, p. 230; Hansard, *Parliamentary History*, vol. xvi. p. 133.

‡ Sheffield, *Observation on the Commerce of the American States*.

and the rise of the cotton industry. By throwing into our hands a vast carrying trade, and by supplying us with markets for cotton and food-stuffs, these events furnished Americans an opportunity to accumulate capital, which they eagerly embraced. The trading capital of the country now for the first time passed into the ownership of our own citizens, and it is significant that this period marks also the rise of commercial banking as well as of marine insurance in this country. The growth of our merchant marine, the numerous small manufactories which sprang up after the embargo, as well as the beginning of turnpike and bridge building, all indicate the progress which was made at this time in the accumulation of capital.*

Still another circumstance contributed to the increase of our resources during this period. The rapid payment of the national debt, both before and after the War of 1812, had the effect of augmenting the capital available for investment. Between 1815 and 1830 the government collected in taxes $123,500,000, and paid it over to the owners of its bonds. In this way small sums were taken from many individuals, and put into the hands of that class in the community who are by nature and habit disposed to save. If these small sums had remained in the hands of the people, they would, for the most part, have been spent, especially since the machinery for collecting small savings of large masses of people, such as is provided by the savings-banks and life insurance companies, did not then exist. Of course, so far as the national debt was owned abroad, its payment would not have the effect of increasing capital. On the contrary, it might have the opposite effect of driving capital out of the country, unless other securities could be furnished, which the foreign investor would be willing to purchase. As we shall see, such securities were

*"The proportion of capital to the demand for it, as might be expected, has been gradually improving in America during the last war (1792–1801). Though the legal rate is only 6 per cent., the market rate was from 12 to 20: at present it is a little more than the legal rate. Great assistance was derived from the establishment of banks and insurance companies. It may give the reader some idea of the commercial means of that country to know that in the year 1805 there were estimated to be 72 public banks with a capital of about $40,000,000 and 43 insurance companies with about $12,000,000 capital." Baring, *Inquiry into the Causes and Consequences of the Orders in Council*, p. 40 (1808).

provided by us during the period we were paying off our national debt most rapidly; and little, if any, foreign capital was lost by the payment of the debt.

It is evident from these facts that after 1815 this country had a considerable fund of domestic capital available for constructing its public works. In the newly settled communities of the West and South-west there was little or no such fund; but in the East, especially the southern New England and Middle States, and, to a less extent, in Virginia and South Carolina, it was possible to raise quite large amounts, enough probably to construct the more important works required. Certainly this was the case in New York, where the Canal Commissioners reported in 1817, that "they entertained no doubt but that as much money can be obtained in this country as may be required for the canals on the credit of the States, at an interest of 6 per cent., by the creation of a funded debt." All the earlier loans for the New York canals were made without difficulty; and the capital secured was chiefly, if not wholly, domestic.

But it was not upon domestic capital alone, or chiefly, that the country had at this time to depend. It was able to draw also upon Europe, and more especially upon England. This circumstance had so great an influence upon the movement we are studying that it calls for a full statement of the facts concerning it. We have seen that English capital in the form of trading capital came freely to America in colonial times and after. To some extent also it came in other kinds of investment, at least after the Revolution. Thus Hamilton noted in 1791 that several industries were owned largely by Englishmen; Pitkin estimated that $30,000,000 of our national debt was owned abroad in 1815; the United States Bank reported in 1809 that three-quarters of its stock of $10,000,000 was held by foreigners; and the commissioners appointed by New York to consider the practicability of a canal through the West said in their report of 1812 that, "notwithstanding the scarcity of money consequent on the wars which had so long raged in and ravaged Europe, a loan of $5,000,000 can be obtained there on the credit of the States." Obviously, even as early as this England was experiencing more or less diffi-

culty in finding at home profitable investments for the great volume of savings which the inventions and improvements of the last part of the eighteenth century enabled her to accumulate. The pressure of surplus capital was, however, not felt in its full force until the close of the wars in 1815. Up to that time the new savings had been absorbed by the growing manufactures, the agricultural improvements of the time, the expanding commerce, the increase of shipping, the building of canals and turnpikes, and, above all, by the expense of the wars. The national debt rose from £136,000,000 sterling in 1763 to £238,000,000 at the close of the American war, and £876,000,000 at the close of the French wars. The tax revenue was £19,000,000 in 1792 and £72,000,000 in 1815. At the close of the war the borrowing of the government ceased, and taxes were reduced. The total amount collected by the government from the people in loans and taxes fell from £108,000,000 in 1813 to only £52,000,000 in 1817. Most of this large sum which had been used to carry on the war, some £40,000,000 or £50,000,000 at least, suddenly had to find a new field for investment. There was no place in English industry where so much new capital could be employed. Commerce and the new manufactures continued to absorb a considerable amount of it; but the difficulty in finding a new market for a rapidly increasing product placed a stubborn limit to their rate of expansion. Conditions were still more unfavorable in agriculture, where landlords and farmers were unable for many years, even with the assistance of corn laws, to earn a fair profit on the capital already sunk in improvements. The canal system of the country was nearly complete. All the leading centres of industry were connected with each other and with the seaboard. Turnpike building progressed but slowly. Until the railroad should be introduced, the transportation system could absorb but little additional capital. Under these conditions the rate of interest must inevitably fall; and, to escape that fall, those who had savings to invest would be forced to turn to highly speculative investments at home or to lend their capital in foreign countries.

The hard times which set in immediately after the wars

checked accumulation, and postponed for a time the decline in the rate of interest. Conditions began to improve about 1820; and in four years 3 per cent. consols went up from 68 to 95. The government converted about £150,000,000 of 5 per cent. stock into a 4 per cent. in 1822, and two years later £70,000,000 of 4 per cents. into a 3½ per cent.* The growth of capital is shown also by the increase in property subject to the legacy duty. It was £28,000,000 in 1815, £29,000,000 in 1819, and nearly £36,000,000 in 1824. Speculation of the wildest kind now became rife. Stock companies were formed in great numbers to carry on enterprises at home and abroad; and few schemes were so visionary as not to receive financial support. Many companies were formed to work mines in the recently emancipated Spanish-American States; but the chief foreign investments were made in government securities. The conversion of the national debt had disturbed a large body of conservative investors, who now bought the securities of foreign countries rather than suffer a reduction of interest from 5 to 3½ per cent.† Large loans were negotiated in London by France and Russia in 1817;‡ and in the three years preceding 1825 more than £17,000,000 of the securities of Continental countries were purchased in London. Exaggerated accounts of the resources and good faith of the newly formed republics of Spanish-America induced a still larger investment in the securities issued by them.§

* Palgrave, *Dictionary of Political Economy*, vol. i. p. 404.

† For the opinion of the governor of the Bank of England concerning the effect of this conversion in unsettling investments see Gilbart, *Principles and Practices of Banking*, vol. i. p. 65.

The conversion carried out by Mr. Goschen in 1888 is supposed to have caused a similar transference of capital to foreign countries, especially to Australia and Argentina. *Journal of the Institute of Bankers*, April, 1894, p. 269.

‡ Tooke, *History of Prices*, vol. ii. p. 53.

§ The following is a list of foreign government loans made in London between 1822 and 1825. The *Economist*, October 18, 1845.

Denmark	£5,500,000	Chili	£1,000,000
Russia	3,500,000	Colombia	6,750,000
Austria	1,500,000	Peru	1,816,000
Portugal	1,500,000	Brazil	5,686,000
Greece	2,800,000	Mexico	6,400 000
Naples	2,500,000	Buenos Ayres	1,000,000
	£17,300.000	Guatemala	167,000
			£22,819,000

A writer in the British *Traveler* states that between 1815 and 1824 foreign loans to the amount of £91,300,000 sterling were taken in England. He placed the amount of American stock held in England at £8,600,000. Niles's *Register*, June 12, 1824.

Such was the situation which developed in England in a few years after the peace. It was not a temporary condition, but continued to prevail for many years. The crisis of 1825, and the hard times which followed it, checked accumulation, and relieved the pressure of surplus capital; but by 1827 improvement began, and in the next three years consols rose from 79 to 94, and the discount rate for first-class bills fell to the unprecedented low point of $2\frac{1}{2}$ per cent. Another crisis came in 1839, followed by a few years of hard times; and then the same situation recurred again.* In fact, it was not until the railway building in the middle of the '40's, the introduction of the steamship and telegraph, and the great expansion of manufactures and commerce which followed the adoption of free trade, the gold discoveries, and the great emigration movement from Ireland and Germany, that England found an adequate field for the employment of new capital in her own industries. The whole period from 1815 to 1845 was therefore one in which the pressure of surplus capital was felt with great intensity. The economists, who had been saying with Malthus that the country was suffering from over-population, began during this period to complain of over-accumulation of capital as well. A group of writers, led by Torrens and Wakefield, maintained that continual accumulation of capital without new fields for enterprise was lowering the rate of profits, causing intense competition among capitalists for investments, and leading to reckless speculation and financial crises.† Under these conditions, Englishmen readily turned to foreign countries for investment.

A number of circumstances recommended the United States to English investors. In the first place the rapid payment of the national debt and its final extinction in 1832 strengthened American public credit as hardly anything else could have done. No other country had ever paid off a national debt,

* Consols were quoted at $89\frac{3}{4}$ in January, 1842, at 95 in 1843, at $97\frac{3}{4}$ in 1844, and at $100\frac{5}{8}$ in 1845. The rate of discount for first-class bills was below $2\frac{1}{2}$ per cent. from September, 1842, to the end of 1844; and several times it went as low as $1\frac{3}{4}$ per cent.

† For the view of these men and others on the situation consult Torrens, *Corn Trade*, 3d edition; *The Colonization of South Australia; The Budget;* Wakefield, *England and America;* Buller, "Speech on Systematic Colonization," in Wakefield's *View of the Art of Colonization;* Malthus, *Political Economy.*

and it was felt that there could be little risk in lending money to a people whose resources were so great and whose disposition so frugal. Moreover, the enterprises for which capital was required in America were favorably regarded by the English public. From the point of view of the investor, canals in England had been very satisfactory. 80 companies, with a total capital of £30,000,000, reported in 1825 an average dividend of $5\frac{3}{4}$ per cent. 10 of these paid from 20 to 28 per cent. dividends; and the stock of 33 companies, representing one-third of the total mileage, was quoted at prices ranging from £200 to £300 per share, and a few as high as £600 and £800.* American canals could hardly hope to prove so profitable as this; but they did not seem at all visionary enterprises, and the financial success of the early ones created great confidence in them.† Towards the banking enterprises of the South-west English capitalists were equally well disposed. England was interested in securing a steady increase in the supply of raw cotton, and in making loans to the South-west for banking purposes she was in reality investing her capital in the same great industry which was the basis of her manufacturing system. Moreover, banking in America had proven very profitable. Englishmen had invested heavily in the stock of the First and Second United States Bank, had received large dividends, and suffered no losses. More and more, therefore, her capitalists after 1815 turned to this country; and by 1830 they seemed ready to supply us with all the capital necessary to complete our system of canals and railways, as well as to assist in the development of our agriculture.‡

* *Quarterly Review*, vol. xi. p. 170; Congressional Document, House Report No. 101, 1st session, 22d Congress, p. 271.

† The revenue of the New York canals increased from $521,000 in 1825 to over $1,000,000 in 1830, and the State was unable to pay off its bonds as rapidly as the revenue accumulated. By 1834 it was actually buying up its canal bonds at a premium of from 5 to 9 per cent.

The Schuylkill Navigation Company was paying 8 per cent. dividends, and the stock was worth 180. The Delaware & Hudson was paying 7 per cent. dividends, and the Lehigh Navigation Company was doing almost as well. House Report No. 414, 1st session, 23d Congress, pp. 39, 285, 295. Hazard's *Register of Pennsylvania*, vol. xii. p. 185.

‡ The following circular, issued by the banking house of Baring Brothers & Co. in the latter part of 1839, when the credit of the States was somewhat impaired, shows what had been the disposition of English capitalists towards America: "I do not doubt but that such gradual purchases will continue, of the stock of the well-

It is impossible to ascertain with accuracy the amount of English capital which found its way to this country during this period. Webster thought there might be $50,000,000 of State stock owned abroad in 1836. Two years later Mr. Garland submitted to the House of Representatives a list of our stocks owned abroad which put the total at $110,000,000.* President Van Buren in his message of 1840 placed the amount at $200,-000,000, and the annual interest charged at not less than $12,000,000. A committee of the House of Representatives a few years later estimated the amount of State securities purchased by foreigners at nearly $150,000,000.† Besides this amount, $28,000,000 of the stock of the United States Bank and $9,000,000 of the stock of the Farmers' Loan and Trust Company, the Camden & Amboy Railroad, and the Commercial Bank of Vicksburg, was owned abroad.‡ Mr. Garland's estimate shows a further sum of about $19,000,000 of the stock of various corporations, chiefly banks, owned abroad. These estimates cannot be verified, but they show that the movement of foreign capital to this country for the purchase of our securities was large.

Not only did foreigners purchase a large amount of our securities, but foreign capital came to us also through the medium of commercial credit. We have seen that during the twenty years prior to 1815 Americans had come to own their own trading capital. In the later '20's, however, we again began to make use of foreign capital in our commerce. Before this

known States which do not over-issue and which faithfully meet their engagements with their creditors, as the confidence in the resources and the national honor of the United States remain undiminished in this country, as well as the conviction that by such investments England employs her annual surplus of capital both safely and profitably, encourages her best customers, and binds more closely the ties of mutual interest between the two countries. But, if the whole scheme of internal improvements for the Union is to be carried into effect on the vast scale and with the rapidity lately projected and by the means of foreign capital, a more comprehensive guarantee than that of the individual States will be required to raise so large an amount in so short a time. A national pledge would undoubtedly collect capital together from all parts of the world." Hazard, *United States Commercial and Statistical Register*, vol. i. p. 405.

* Niles's *Register*, vol. liv. p. 22.

† House Report No. 296, 3d session, 27th Congress.

‡ Sumner, *A History of Banking in the United States*, p. 342; Niles's *Register*, vol. liv. p. 352; Armstrong, *Stock Jobbing in Wall Street*, p. 29; Ringwalt, *Transportation System of the United States*, p. 79.

it had been the practice for English merchants to execute orders for America, and transmit the invoices and bills of lading to their agents in America, who then delivered the goods on receipt of payment. The wealth and financial standing of American houses increased to such an extent that they began to establish their own agents in the manufacturing districts of England and the Continent for the purchase and shipment of goods to America. They were able also to obtain credit with the great Anglo-American houses in London or Liverpool, who would then allow the agents to draw upon them at four months to pay for the goods purchased and shipped to America. This arrangement was also introduced into other branches of our foreign trade, notably with India, China, and South America. American merchants were allowed to pay for their cargoes from those places by means of bills on London, which were allowed to run until met by the export of American produce.* The system practically amounted to this: Englishmen bought nearly all of our products for cash, sold their own to us on credit, and in addition supplied us with letters of credit against which we could draw in all parts of the world. The effect of such an arrangement would obviously be to replace American capital engaged in foreign trade by English capital supplied by the great Anglo-American mercantile houses in London and Liverpool or by the numerous joint stock banks which eagerly discounted the paper of these houses.† The American capital thus liberated from trade became available for carrying on the various improvements within the country. The amount of capital thus lent to us on commercial account may be estimated from the acceptances of these Anglo-American houses, which in 1836 were said to amount to £20,000,000. If we add this to the amount invested in our securities of

* For an account of this method of doing business see *Edinburgh Review*, No. 132, p 229; *Bankers' Magazine*, London, vol. xiv. p. 601; R. B. Curtis in *North American Review*, vol. lviii. p. 112; and President's Message to Congress, December, 1839.

† There were seven of these houses, six in London and one in Liverpool. *Edinburgh Review*, No. 132, p. 229; Niles's *Register*, vol. lii. p. 232.

Webster said in 1836, "It is certain that a large amount of property now afloat in ships and goods owned by Americans and sailing and transporting on American account is put into commercial operation by means of foreign capital actually advanced or acting through the agency of credit." *Works*, vol. iv. p. 261.

various kinds, it is safe to say that nearly three hundred million dollars of foreign capital was lent to this country between 1815 and 1840.

The American people were perfectly aware of the possibility of securing foreign capital at this time. New York from the first looked to this source to secure the funds necessary for her canals; Ohio did likewise;* and Louisiana and the city of New Orleans, in the early '20's, were negotiating loans in London. The success of these first loans encouraged others; and after 1830 the whole country looked to England for capital to carry out its system of internal improvements, just as Australia and Argentina have relied upon the same sources in later times. A large number of the public works were planned with this prospect clearly in view, and would not have been undertaken without it. Events proved that the works could not be carried on after foreign capital ceased to be lent freely to them. When the market for American securities in London failed towards the end of 1839, work on public improvements in most of the States was checked, and ceased altogether in several of the Western States. The Wabash & Erie Canal in Indiana and the Illinois & Michigan Canal in Illinois were not completed until an arrangement was made with English capitalists some years later to supply the funds.

Such was the situation regarding the demand for capital in this country, and the supply of it during the period we are investigating. We come now to the question how far private enterprise was able to deal with this situation. The means by which the large masses of capital required by modern industry is brought together is the corporation; and we have next to examine the condition of corporations, and ascertain how far they were able to perform the services required of them. Private business corporations began to be created in this country soon after the Revolution; and their rise was undoubtedly due to the growth of industries which required more capital than could be easily supplied by individuals or partnerships.† The industry in which they first appeared,

* See *Public Document concerning the Ohio Canal*, pp. 84-95.

† It is the opinion of a recent writer "that private business corporations were always viewed with disfavor by the mass of the community in every American

and in which for many years the most important ones were to be found, was banking. Congress chartered the Bank of North America in 1781, and the next year Pennsylvania and New York each granted it a charter. By 1791 most of the States had chartered one or more banks, and the federal government the Bank of the United States. Ten years later there were 88 State banks, and in 1830 330.* Insurance companies grew up about the same time, and became very numerous as the commerce of the country expanded after the outbreak of the European wars.† There were 29 companies in the city of New York in 1830, 19 in Boston, 13 in Philadelphia, and 6 each in Baltimore and New Orleans.‡ When the people turned their attention to improving the transportation facilities of the country, a large number of companies for that purpose were formed. Virginia chartered 2 canal companies in 1784, and several were chartered by Pennsylvania, New York, and Massachusetts by the end of the century; but canal companies were never numerous in any of the States, and, as already pointed out, in very few cases accomplished the purposes for which they were formed. Far more important and more numerous were the turnpike and bridge companies, the first of which was chartered by Pennsylvania in 1792, and which after 1800 were created in great numbers by all the States north of Maryland and to some extent by the Southern States. By 1812 Pennsylvania had chartered 57,

colony, and also in the States which succeeded them, until the end of the eighteenth century." Baldwin, *Modern Political Institutions*, p. 190.

It is true that hardly any such corporations existed in the colonies, but there was very little demand for them. As soon as industries arose which needed them, the legislatures of the different States began to charter them in great numbers. The development of corporations may therefore be traced in the statutes of the States; and the statements in the text are chiefly based upon an examination of the statutes of the more important States, like Massachusetts, Pennsylvania, Connecticut, Maryland, Virginia, and South Carolina.

* Gallatin, *Considerations on the Currency and Banking of the United States.*

† Pennsylvania chartered an insurance company in 1786, Virginia in 1789, Maryland in 1794, Connecticut in 1797, New York and Massachusetts in 1798. From this time on the number chartered was very great. Massachusetts chartered 23 by 1805, and 7 more by 1812. New York chartered 15 by 1812.

‡ Ruess, *Calculations and Statements of the Trade between Great Britain and the United States of America.*

This book contains a list of the principal joint stock companies existing in 1830 in twenty-five of the largest cities.

New York 112, Massachusetts 78, Maryland 8, Virginia 8. Pennsylvania also chartered 21 bridge companies during the same period, and they were nearly as numerous in other States.* In the same way, when the embargo turned the attention of the Northern States to manufacturing, corporations for that purpose made their appearance, especially in New England and New York. 5 or 6 such companies were chartered in Massachusetts before 1808, but 106 were chartered between that time and 1815; and in New York 47 were chartered in the six years following 1809. Water companies also appeared about this time. 26 were chartered in New York before 1812, and 21 from that time to 1829. Steamboat companies were also created in considerable numbers as the introduction of steamboats took place.

Thus by 1830 business corporations of various kinds were very numerous in this country, and the American people had already shown remarkable facility in forming them. De Tocqueville declared that

> The most democratic country on the face of the earth is that in which men have, in our time carried to the highest perfection the art of pursuing in common the object of their common desires, and have applied this new science to the greatest number of purposes.†

Nevertheless, a little consideration of the extent and character of the business operations of corporations at this time will show that they were not yet able to raise very large sums of capital, especially for such enterprises as were then most prominent. Much the largest corporations were banks; and, with the exception of the United States Bank, there was but one that had as large a capital as $2,900,000. Of the 330 State banks, only 7 had as much as $2,000,000 capital, and only 30 as much as $1,000,000.

*I have not counted the acts in all the States, but have glanced over the statutes to make sure that such acts were numerous.

† "Americans of all ages, all conditions, and all dispositions, constantly form associations. They have not only commercial and manufacturing companies, in which all take part, but associations of a thousand other kinds,— religious, moral, serious, futile, general or restricted, enormous or diminutive. . . . Wherever, at the head of some new undertaking, you see the government in France or a man of rank in England, in the United States, you will be sure to find an association." *Democracy in America*, vol. i. p. 129.

Several of the largest of these were in the South, and were heavily subsidized by the States. Insurance companies were still smaller. New York had two with $1,000,000 capital, and New Orleans one; Philadelphia had one with $600,000; and in all the rest of the country there were only fifteen with a capital of half a million dollars. The great majority of both banks and insurance companies were small concerns with less than $100,000 capital.* Two or three of the big textile manufacturing companies of New England had about a million capital in 1830; but, for the most part, manufacturing companies were even smaller than insurance companies.† It would appear from these facts that no great difficulty was experienced in raising from half a million to one or two millions of capital for banks and insurance companies. But it should be noted that all the larger companies of this kind were organized in the commercial cities, where most of the loanable capital of the country was owned. The capital was supplied chiefly by the business men of the cities where they were organized. Except in the West and South, where State aid to banks was common, banking corporations did not have to attract capital from a distance or collect it from a great many small sources in different communities. Moreover, in neither of these industries was the capital actually sunk in a single industrial undertaking; it was in reality divided in loans among a great number of different industries, chiefly commercial, and for that reason involved much less risk than industries requiring large fixed capital. The conditions for the formation of corporations were, therefore, very favorable in these industries. To a great extent, conditions were

* Gallatin, *Considerations on the Currency and Banking System of the United States*; Ruess, *Calculations and Statements of the Trade between Great Britain and the United States*; Martin, *Boston Stock Market*. Of the 20 companies chartered by Massachusetts between 1802 and 1805, 5 had an authorized capital of $300,000, 9 of $100,000 or less, and the rest amounts between these two extremes. In New York the companies chartered before 1812 had authorized capital of from $200,000 to $500,000; those between 1319 and 1821 were all below $500,000.

† Martin, *Boston Stock Market*, pp. 96-98. Of the 21 companies chartered in New York in the years 1811 and 1812, only one had an authorized capital of half a million, and most only $100,000. The general act of New York passed in 1811 limited the capital of all companies formed under it to $100,000. Of the 11 companies chartered in Massachusetts between 1808 and 1810, 3 had authorized capital of $250,000, and all the rest were below that amount.

also favorable to the formation of manufacturing companies. The amount of capital necessary to establish a manufacturing industry was not large, and could be easily supplied by a few men. The stock of manufacturing companies was usually owned by the men directly interested in the enterprise, and was rarely bought and sold. It was not quoted on the Boston stock market before 1827, and in 1830 the stock of only six of the largest companies was dealt in there.* In the case of turnpike and bridge companies it would seem that no great difficulty should have been experienced in raising the small amount of capital which they required. Nevertheless, one State at least, Pennsylvania, found it advisable to adopt the policy of subsidizing turnpike companies as early as 1806, and bridge companies in 1811. By 1822 that State had subscribed $1,861,000 to the stock of fifty-six turnpike companies, and $382,000 to the stock of twelve bridge companies.† South Carolina also expended about two million dollars of State funds on turnpikes and canals. We have already seen how few of the canal companies formed before 1815 succeeded in accomplishing very much. The Middlesex in Massachusetts and the Santee & Cooper in South Carolina were the only important ones not assisted by the States. They were comparatively small undertakings, requiring only a little over half a million dollars each. The State of New York supplied most of the capital of the Western & Northern Inland Lock Navigation Company, and Maryland and Virginia did the same for the Potomac and the James River Companies. Companies that received no public assistance, like the Delaware & Chesapeake in Maryland and the Delaware & Schuylkill and Schuylkill & Susquehanna in Pennsylvania, were unable to accomplish anything worthy of notice. In the later '20's a number of canals were built by private companies, with

* By 1846 this number had increased to forty-six, which indicates that at that time capital for manufactures in New England at least was being drawn from a much wider source than was the case before 1830. Martin, *Boston Stock Exchange*, p. 87.

† Duponceau, *Laws of the Commonwealth of Pennsylvania*, vol. vii. p. 416. The amount of private capital in the same companies was, respectively, $4,580,000 and $1,629,000. The State had also invested $130,000 in the stock of three canal and navigation companies, whose private capital amounted to $1,416,000.

little or no assistance from the States. The Blackstone and Farmington Canals in New England, the Morris Canal in New Jersey, and the Lehigh Navigation in Pennsylvania were constructed entirely with private funds. The Schuylkill Navigation and the Union Canal Companies received small subscriptions of stock from Pennsylvania; New York contributed $800,000 to the Delaware & Hudson Canal; and the federal government, Pennsylvania, Maryland, and Delaware, $475,000 to the Delaware & Chesapeake Canal, which was resumed in 1824. The largest of these were the Delaware & Hudson Canal, which cost $2,300,000, and the Schuylkill Navigation, which cost $2,190,000. The Blackstone and Farmington Canals were estimated to cost about half a million dollars each, and the others ranged from a million to a million and a half.*

From these facts it is safe to conclude that corporations before 1830 were not able to raise any large amounts of capital without public assistance. This was not due to a lack of adequate supplies of capital, as we have seen. The difficulty related rather to the means of securing control of the existing supply,— of inducing its owners to invest it in the various enterprises of the day. The nature of that difficulty will be apparent if we consider for a moment the position and character of the persons who did the saving and supplied the capital for the community at that time. So far as domestic capital was concerned, there was no large class of persons, who on account of large incomes were willing to devote a part of their savings to risky investments or to those from which a return must be slow as well as uncertain. Such capital as existed was chiefly in the hands of small savers, who were naturally more interested in security than in the chance of large returns. There was no doubt a certain number of persons affected by the gambling spirit, as the prevalence of lotteries goes to show. There was also a considerable number of speculators pure and simple,— men who buy and sell, making or losing from the fluctuations of prices. But there were very few speculative investors,— men who devote a part of

* *A Connected View of the Whole Internal Navigation of the United States*, Philadelphia, 1830; *American Almanac for* 1830, p. 223.

their savings to investments involving great risk and requiring long periods of time to yield a return. This latter type of person is very numerous in this country at the present time; and, as a result, there is a great amount of savings constantly seeking new and uncertain investments. The existence of this speculative fund renders it certain that every project which offers even a remote chance of success, be it either the expansion of an old industry or the establishment of a new one, will receive a thorough trial. In the early part of the nineteenth century such persons were comparatively few. Consequently there was no such speculative fund, and no such assurance that promising industrial experiments would be tried. It is this difference which made the argument for protection to infant industries have so great force in the time of Hamilton and Clay, and gives it so little in our own time.

Regarding foreign capital the situation was somewhat different. There were many people in England ready to risk their capital in all sorts of uncertain undertakings rather than accept the inevitable fall in the rate of interest, as the wild speculations which preceded the crisis of 1825 abundantly proves; but, from the nature of the case, before modern means of communicating came into existence a foreigner could have but an imperfect knowledge of the character of the enterprise for which his capital was sought. He could not acquire the knowledge necessary to judge the merits of the project he was asked to support. Consequently, it was necessary, in order to secure his capital, to offer him a pledge of the faith and credit of some individual or combination of individuals who were able to command his confidence, as well as to present a promising enterprise. Accordingly, we find that English foreign investments in the early part of the nineteenth century were made chiefly in public securities. The stock and bonds of private corporations formed in foreign countries, unless indorsed by the government, played but a very small part on the London stock market until after the middle of the century. It was the public securities of the European countries, the Spanish-American Republics, and the American States, which were chiefly purchased by the English capitalists. The only American corporation whose securities were well known in Europe before 1830

was the United States Bank, and even ten years later only about a dozen American corporations had sold any of their securities there.*

Such were the conditions regarding the demand for capital, the available supply of it, and the ability of corporations to secure control of large masses of it, during the first thirty years of the century. With these facts before us, the chief reason for making use of the powers of the State in industrial affairs, which was noted at the beginning, becomes clear. The opening of the West gave rise to an enormous increase in the demand for capital, chiefly to provide works of internal improvement. To construct any of the more important of these works required several millions of capital,—an amount far greater than had been brought together in any industry in this country up to that time. For corporations to secure so much capital it was necessary to bring together the many small savings of this country; and to attract the large ones of foreigners. There was no body of private individuals in the country well enough known and with sufficient influence in the business world to establish the credit of a corporation so that it could command the confidence of both these classes of investors. The only securities that could do this were public securities, or the securities of corporations which were guaranteed or assisted by the government. American public credit had been raised to the highest pitch by the debt-paying policy of the federal government; and it was inevitable that the American people should turn to the only means in their power to provide for their needs. When New York demonstrated that it was easy to secure all the capital necessary for carrying out public works by the issue of bonds on the credit of the State, the way was open for other States to pursue the same course; and only New Jersey and the smaller New England States refused to enter upon it.

*The following is a list of all the corporations whose stock was purchased by foreigners, so far as any mention of the same appears in the financial periodicals of the time: the United States Bank; the Morris Canal Company; Delaware & Raritan Canal Company; the Camden & Amboy Railroad; Louisiana State Bank; the Bank of Louisiana; New Orleans Canal and Banking Company; Mississippi Planters' Bank; the Tennessee Banks; New York Life Insurance and Trust Company; American Life Insurance and Trust Company; North American Banking and Trust Company; Manhattan Bank; Commercial Railroad Bank of Vicksburg; Cairo City Company.

The crisis of 1839, and the subsequent embarrassment of the States, ruined public credit for a time, and put an end to the movement. In the older States of the North, like Massachusetts, New York, and Pennsylvania, it was never resumed, except in the case of the enlargement of the Erie Canal and the building of the Hoosac Tunnel. In the West and South, however, where capital was more difficult to secure, public assistance to railways was resumed in the later '40's, and continued in some sections until comparatively recent times. In the West this assistance was granted in the shape of subsidies by counties, towns, and cities. In the South, however, the States also took part in it. Virginia, South Carolina, Tennessee, and Missouri created debts aggregating over $80,000,000 for this purpose between 1848 and the Civil War. South Carolina, Georgia, and Louisiana were fairly started on the same course when the war broke out; and, after the war, under the reconstruction governments, all the Southern States adopted the policy on a large scale. Local bodies were also active. Hardly a Southern city of any importance failed to make grants of aid to railway lines in which they were especially interested. In Louisiana, Mississippi, and Kentucky general acts were passed granting permission to the counties to issue bonds for this purpose. During the same time the federal government made large grants of land to the States, which were turned over to railway companies; and, in one case, the Union and Central Pacific Railways, gave bond subsidies as well. Thus so long as corporations found difficulty in raising the capital required to build railway lines, the credit of the national, State, and local government was freely used to assist them.

III.

The question naturally arises now whether this movement at the beginning was due entirely to the difficulty of securing sufficient capital by means of private enterprise. Was there no feeling on the part of the American people that the business of supplying transportation and banking facilities could not be safely intrusted to private enterprise? Was there no wide-spread public opposition to corporations as such? To

answer that question, it is necessary to examine the discussions which preceded the various public enterprises as they appear in the messages of governors, the reports of legislative committees, and the Congressional debates on internal improvements. Such ideas were not entirely absent from these discussions. Thus the New York Canal Commissioners in their first report on the Erie Canal devoted a few remarks to the question of whether the canal should be built at public or private expense, and protested against a grant to private persons or companies: —

Too great a national interest is at stake. It must not become the subject of a job or a fund for speculation. Among many other objections there is one insuperable,— that it would defeat the contemplated cheapness of transportation. It should always, on occasions of this sort, be recollected that the reasons adduced for grants to individuals in Europe apply inversely here. Few of our public citizens have more money than they want, and, of the many who want, few find facilities for obtaining it; but the public can readily, at a fair interest, command any reasonable sum. Moreover, such large expenditures can be more economically made under public authority than by the care and vigilance of any company.

The Ohio Canal Commissioners in 1825 reported in favor of State construction rather than grants to corporations, and gave the following reasons for their opinion: —

Our jurisprudence, which borrows its principles and reasons from England, has vigorously adopted this doctrine of immortality of corporations, naturalized and established it as law in our free government, and stretched over its dogma the ægis of the Constitution, so that now whatever is granted to a private corporation by the legislature is holden to be intangible and irrevocable. . . . Nothing can be more interesting to the whole community than the great navigable highways through the State from the lakes to the Ohio River on the routes proposed. It does not consist with the dignity, the interest, or the convenience of the State that a private company of citizens or foreigners (as may happen) should have the management and control of them. The evils of such management cannot be fully foreseen, and therefore cannot be fully provided against. . . . Besides, such works should be considered with a view to the greatest possible accommodation to our citizens; as a public work, the public convenience is the paramount object; and a private company will look only to the best

means for increasing their profits. The public convenience will be regarded only as it is subservient to their emolument. We think, therefore, that it would be extremely hazardous and unwise to intrust private companies with making these canals which can be made by the State.

The first American work on political economy published in 1820 contained a chapter on corporations, which was decidedly hostile to them. Its author declared that

Every moneyed corporation is *prima facie* injurious to the national wealth, and ought to be looked upon by those who have no money with jealousy and suspicion. They are, and ought to be, considered as artificial engines of power, contrived by the rich for the purpose of increasing their already too great ascendency and calculated to destroy that natural equality among men which no government ought to lend its power in destroying. The tendency of such institutions is to cause a more unequal division of property and a greater inequality among men than would otherwise take place.*

Such opinions as these indicate the existence of a certain amount of opposition, not only to the corporate control of important works of transportation, but also to corporations themselves. The popular opposition to the United States Bank in Jackson's time was, no doubt, to some extent due to this hostile feeling, although it should be noted that many of the States, which denounced that institution as a monster corporation, did not hesitate to create State banks of several millions capital, and to give them a complete monopoly of the banking business within their territory. These views were, however, far from representing the prevailing attitude of the people. They appear but rarely in the public discussions, are nowhere discussed in detail, and do not appear to have had much influence in determining legislation. The readiness with which the legislatures of all the States created corporations for all sorts of purposes, whenever they were called for by individuals, in many cases granting the privilege of limited liability, shows that the opposition to corporations as such was insignificant.†

* Raymond, *Political Economy*, Part II., chap. vi.

† New York limited the liability of stockholders of manufacturing companies to an amount equal to the value of their stock in 1811. Connecticut granted full limited liability to such companies in 1817, and Massachusetts in 1830. Maryland

The considerations which received the principal attention, and which chiefly determined the policy pursued, were of an entirely different nature. They related to the utility to the community of the various improvements contemplated, and to the inability of private enterprise to secure the capital to construct them. Long arguments were presented to show that the benefits to be derived by the community at large from such improvements were sufficient to justify their construction at public expense, even though private capital should not find it profitable to undertake them. A good statement of these views was made by Clay in the Congressional debates on internal improvements in 1818: —

In regard to internal improvements, it would not always follow that they would be constructed whenever they would afford a competent dividend upon the capital invested. It may be true generally that in old countries, where there is a great accumulation of surplus capital and a consequent low rate of interest, they would be made. But in a new country the conditions of society may be ripe for public works long before there is, in the hands of individuals, the necessary accumulation of capital to effect them. . . . Further, the aggregate benefit resulting to the whole society from a public improvement may be such as to amply justify the investment of capital in its execution; and yet that benefit may be so distributed among different and distant persons that they can never be got to act in concert. The turnpike road wanted to pass the Alleghany Mountains, and the Delaware and Chesapeake Canal, are objects of this description. Those who would be most benefited by these improvements reside at a considerable distance from the sites of them. Many of those persons never have seen and never will see them. How is it possible to regulate the contributions, or to present to individuals so situated a sufficiently lively picture of their real interest to get them to make exertions, in effecting the object, commensurate with their respective abilities? I think it very possible that the capitalist who should invest his money in these objects might not be reimbursed 3 per cent. annually upon it; and yet society, in various forms, might actually reap 15 or 20 per cent. The benefit resulting from a turnpike road made by private associations is divided between the capitalist, who receives his toll, the lands through which it passes and which

granted it to banks as early as 1804, and Virginia and Connecticut to insurance companies still earlier. New York and Connecticut in 1811 and 1817, respectively, allowed individuals to form manufacturing corporations without special act of the legislature.

are augmented in their value, and the commodities whose value is enhanced by the diminished expense of transportation. A combination upon any terms, much less a just combination of these interests, to effect the improvement, is impracticable; and, if you await the arrival of the period when the tolls alone can produce a competent dividend, it is evident that you will have to suspend its execution until long after the general interest of society would have authorized it.*

Such reasoning as this may be found in the public documents of most of the States which adopted the policy of internal improvement. Sometimes it appears in the discussions which preceded the construction of the works, and sometimes it is used to justify that policy after experience had shown that the tolls were not sufficient to pay the interest on the public debt created to carry it out. The Ohio Canal Commissioners at the outset of their enterprise, after expressing their opinion that the construction of the canals would be a prudent investment of capital, declared that

a more important and interesting inquiry is what are the advantages which the people of this State may derive by the construction of navigable canals.

After the canals had been finished, they laid still greater stress upon the fact that, in estimating their value to the State, the revenue accruing from tolls was a matter of secondary importance. By taking the amount of tonnage received and exported from either end of the canal in 1832, and estimating the rise in the price of exports and the fall in the price of imports, they reached the conclusion that the aggregate saving to the people had amounted to $312,000; whereas the taxes raised to pay interest on the canal amounted to only $143,000. The governor of Virginia in 1850 said:—

The policy which has heretofore controlled the action of the legislature in contributing to works of improvement has looked rather to the benefit to be derived from increased and enhanced value of lands than to returns in the form of tolls to the treasury. The wisdom of the policy stands fully vindicated by the recent assessment of land in the commonwealth, which shows an increase of 29½ per cent. upon

* *Annals of Congress*, 1817-18, p. 1377.

the entire landed property during the last twelve years, . . . while the increase between the assessments of 1819 and 1838 was only $2\frac{1}{2}$ per cent.*

It is safe to say that these extracts express the prevailing opinion of the people towards the policy of internal improvements. That movement was not, therefore, due to any modern socialistic or populistic idea that the business of supplying transportation and banking facilities to the community was not a safe and legitimate one, to be left to the management of private enterprise. As a matter of fact, only a part of the States undertook the actual construction and control of such works. This was the policy of New York, Pennsylvania, Ohio, and the North-western States, excepting in the case of one or two canals and railways and all the turnpikes; but Massachusetts, Maryland, and the Southern States generally pursued the policy of chartering corporations to carry out the works, and assisting these corporations by subscriptions to their stock or by loans of State credit.† After the crisis of the early '40's, all the States pursued this policy of assisting corporations. It required the experience of later years with the evils of unrestricted private railway management, the rise of labor difficulties, and the appearance of monopolies and trusts in many industries, to teach the American public that private enterprise might sometimes require to be restricted and controlled rather than stimulated, in the interest of public welfare. Down to the Civil War, except in case of the banking industry, the powers of the government were used to encourage and assist private enterprise, not to restrict it.

It remains to add a few words further concerning the connection of the States with banking enterprises. It has already been pointed out that nearly all the States invested public funds, derived either from revenue or from the sale of State bonds, in the stock of banking corporations. The motive which caused this wide-spread connection of the States with banks was not, however, the same in all sections of the country. In the older

* Compare also the prospectus issued by the convention held to promote the Chesapeake & Ohio Canal, in House Report No. 414, 1st session, 23d Congress, p. 13.

† Virginia first chartered a company to construct the James River & Kanawha Canal, and subsequently made it a State work; Kentucky constructed her river improvements; and Georgia built the Western & Atlantic Railway.

States, both North and South, it was not primarily, if at all, due to a desire to encourage the growth of banking. Banks needed no such encouragement in those States. On the contrary, they were regarded as very profitable enterprises, and the investment of capital in them as a distinct privilege. In New York, at least, the struggle of individuals to secure charters from the legislature gave rise to political corruption. Many of the early charters contained provisions for the investment of educational funds in bank stock. The early Connecticut charters provided that "the bank shall at all times be open for subscriptions at the rate of one hundred dollars for each share from the school fund of this state, and from the funds of any college, ecclesiastical society, school, or corporation for charitable purposes within the state." Several New York charters contained similar clauses. The act which rechartered the Bank of New York in 1813 authorized the Comptroller of the State to subscribe $15,000 to the stock of the bank for the benefit of the common schools; and the treasurers of Hamilton, Union, and Columbia Colleges, were given the right to subscribe a similar amount for the benefit of these institutions. Banking privileges were frequently given to companies formed for the purpose of carrying out canals and railways, as in case of the Morris Canal Company, the Central Railway and Banking Company of Georgia, and the South-western Railroad Bank of South Carolina. Clearly, the banking business was looked upon as in some way exceptionally advantageous to the investor; and the devotion of the surplus public revenue to the purchase of bank stock was simply a device for increasing the revenue of the State.

In the newer States, where capital was more scarce, other motives played a considerable part. The people were anxious to furnish a circulating medium, and also to provide banking accommodations to the commercial classes, as well as loans to farmers. But in all, except the cotton States of the Gulf region, the desire to secure for the benefit of the public the large profits to be earned in the banking business was an important, if not the most important, motive which led the States to invest in these industries. Thus, when Indiana and Illinois began their system of internal improvements, they

both increased the capital of certain banks, and authorized the States to subscribe for the new capital. In Illinois the act which authorized this action was entitled "an act to increase the capital stock of certain banks, and to provide means to pay the interest on a loan authorized by an act entitled 'an act to establish and maintain a general system of internal improvements.'" These States could borrow money at 5 or 6 per cent. interest, and the banks earned from 7 to 9 per cent. dividends. They found it profitable, therefore, to provide for the payment of a part of the interest on their internal improvement debts by selling bonds and investing the proceeds in bank stock. A similar motive influenced the action of Kentucky and Tennessee. The governor of Kentucky urged the legislature to subscribe for bank stock in order to provide funds for a system of public education; and the act which established the Bank of Tennessee, in which the State invested $1,500,000, was entitled "an act to establish a state bank to raise a fund for internal improvements, and to aid in a system of education."

In the South-west the situation was different. The demand for capital here, and the difficulty of obtaining it, were, perhaps, greater than in any other part of the country. It is true there were no important works of internal improvement undertaken, except in Louisiana, where the State issued $1,200,000 worth of bonds to assist railroad companies. But the character of agriculture gave rise to a very great demand for capital. The plantation system carried on by slave labor is a highly capitalistic form of industry. Not only has labor to be employed on a large scale, but the planter has to purchase the labor outright, as well as to maintain it from year to year. This involves an enormous initial expense to the person who begins cotton or sugar culture with slave labor. As the planter's crop is marketed but once in the year, it is necessary for him to have large supplies of provisions on hand before these provisions can be paid for from the proceeds of his crop. The Southern planter was therefore more like a man engaged in manufacturing or commercial business than like a Northern farmer, and, like the manufacturer and merchant, required from time to time advances of capital to

enable him to carry on his business. When it came to settling a new country with such a system of agriculture, the demand for capital became still greater. The hardy settler of the North-west could move into the wilderness with his family and gain a livelihood for them from the first, while he cleared his land and prepared it for cultivation; but the planter had to maintain his slaves while the land was being cleared and the first crop produced, which would require at least a year and often more. The capital required to supply this demand not only did not exist in these new States, but it could be supplied to only a limited extent from older slave States, since slavery prevented that accumulation of capital which would have taken place in a free community possessing the same favorable economic conditions.

The planters of this region had therefore to attract capital from the North and from Europe; and for this purpose the credit of individual planters or of such corporations as could be formed in a new country was as inadequate as it was in Northern States to secure funds for canals and railways. Nothing was left but to make use of public credit to supply this deficiency; and every new slave State in the South from Florida to Arkansas established one or more banks and supplied all or nearly all of their capital by a sale of State bonds. Many of the banks were known as "property banks," and were designed especially to furnish loans to planters. The business of all of them consisted in providing the capital for producing and marketing the cotton and sugar of this region.* Thus in the South-west, where nature already provided an adequate system of transportation, the State banking enterprises formed the counterpart of the internal improvement movement of the North and East.

G. S. CALLENDER.

BOWDOIN COLLEGE.

*Trotter, *Observations on the Financial Position and Credit of the States of the North American Union*, chap. vi.